

Applicant: Xiaoqing Zheng
For: ROTARY FACE SEAL ASSEMBLY

ABSTRACT OF THE DISCLOSURE

5 A rotary seal assembly including a first member having a sealing face and a
second member having a sealing face with a number of pumping grooves therein. At
least a first set of pumping grooves starting proximate a center portion of the sealing face
and extending outward and at least a second set of pumping grooves starting proximate
the center portion of the sealing face and extending inward to direct fluid fed to the center
10 portion of the sealing face simultaneously both inwardly and outwardly from the center
portion of the sealing face to provide a uniform fluid film thickness between the sealing
faces of the first and second members when one sealing face cones due to thermal and/or
pressure effects.